

Work Order ID 84263

May-08-12 2:42:13 PM

84263

Page 1

Item ID: D212-664-201

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Crosstube Aft

Stop

NS2

Start Date: 08/05/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 28/05/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: MLJDate: 12/05/08 Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

Draw Nbr Revision Nbr

D212-664-241 Rev D (DEO)
DSI9563 B

100 0.00

100 DOCUMENT CONTROL

DC Memo 0.00

Document Control Photocopy bluefile and create labels as per PPP D212-664-201 CHG005

5/16 DAS 16 12/07/16

20 Form MLJ 12-7-16

110 0.00

110 Pick Kit

Packaging Memo 0.00

Packaging 0.00

MO 12-6-26

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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| - | - | | | | | | | |
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NOTE: Date & initial all entries

W/O: 84263

WORK ORDER CHANGES

| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
|------|------|------------------|----|------|-----|-------------------------------------|--------------------------|
| | | | | | | | |
| | | | | | | | |

Part No: D212664-201 PAR #: Fault Category: X - false NCR: Yes / No DQA: 10/2 Date: 12/07/19
 Resolution: Disposition: QA: N/C Closed: Date: 12/12/20

| WORK ORDER NON-CONFORMANCE (NCR) | | | | | | | | |
|----------------------------------|------|--|--------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initials Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 12/06/17 | 120 | CRUSHING AFTER ASSEMBLING IS OVER TOLERANCE. | P 12/6/17 Q5154C | Acceptable per attached SR | NA | S 12/06/17 | P 12/6/17 | S 12/04/20 |
| | | | | | | | | |
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NOTE: Date & initial all entries

Work Order ID 84263

May-08-12 2:42:13 PM

Item ID: D212-664-201

Accept

Revision ID:

Item Name: Crosstube Aft

Start Date: 08/05/2012 Start Qty: 1.00 *1*

Required Date: 28/05/2012 Req'd Qty: 1.00 *1*

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

140

Crosstubes

Crosstubes

Memo 0.00

1-Drill pilot holes in tube as per Dwg D212-664-241 using drill Jig DT8550, DT8551, drill table DT8577 and locate tower holes #8 as per QSI0010.

2-Ream hole to finish size in tube as per Dwg D212-664-241 using drill Jig DT8550 & DT8551. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes.

3-Scribe part # and batch # using vibrating stylus as per Dwg D212-664-241

4-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D212-664-241

MO / RM

12-6-28

MO

12-6-28

150
150 155
HandFinishing Crosstubes

Crosstubes Chemical Conversion

0.00

Memo 0.00
Chemical Conversion Coat as within 24 hours of bending and drilling

150 Qc 5 *wear latex gloves* -5/16/05

151 *Wear latex gloves* 1-clean crosstube with wash n wipe

12-7-6

84263

N900040100

Setup

Start

NS1

Stop

NS2

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NS1

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Item Name: Crosstube Aft

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Cust Item ID:

Required Date: 28/05/2012 Req'd Qty: 1.00 *1*

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Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

168

*160*156

QC

Quality Control

QC3- Inspect Part Finish

0.00

170

*170*157

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Memo

0.00

180

Outsource process - NDT per QSI038 4.1

0.00

180

Outsource2

Outsource process - NDT

Memo

0.00

Liquid Penetrant Inspection as per QSI 038

Issue P/O: 17380

LPI as per ASTM 1417 Level 2

Attach copy of NDT results to work order

** Wear latex gloves **

CL 12/07/09 ①

| W/O: | | WORK ORDER CHANGES | | | | | | | |
|------|------|--------------------|--|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | | | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

W/O: 84263

WORK ORDER CHANGES

| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
|----------|------|--|--------|----------|-----|-------------------------------------|--------------------------|
| 12/07/06 | 201 | APTEL COMPLETION OF STEP 201 MOVE TO STEP 155, 156, 157 ONCE COMPLETE MOVE TO STEP 210 | P.Sher | 12/07/06 | 1 | | |
| | | | | | | | |

Part No: D212-664-201 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Item ID: D212-664-201

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Crosstube Aft

Stop

NS2

Start Date: 08/05/2012 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 28/05/2012 Req'd Qty: 1.00 *1*

Customer:

Reference:

| | | | | | | | |
|------------|---------------|-------|------------|-------|-----|-------|-------|
| Approvals: | Process Plan: | Date: | Tooling: | Date: | Run | Start | *NR1* |
| | QC: | Date: | SPC (Y/N): | Date: | | Stop | *NR2* |

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|-----------------------------------|--|----------------------|----------------------------|--------|--------------|---------------|---------------|------------------|----------------|
| 210 *210* SprayPaint | Spray Painting per QSI005 4.2 SprayPaint <i>* Wear latex gloves *</i> | 0.00 | | | | | | | |
| Spray Painting | Memo I-Prime inside and outside crosstube as per QSI 005 4.2 | 0.00 | | | | | | | |
| | 2-Paint outside crosstube as per DEO D212-667-241 with White Imron as per QSI 005 4.2 | | | | | | | | |
| | PRIME: Start Time: <u>10:00</u> → <u>12:07:09</u> (1) Finish Time: <u>11:00</u> | | | | | | | | |
| | PAINT: Start Time: <u>10:00</u> → <u>12:07:10</u> (1) Finish Time: <u>11:00</u> | | | | | | | | |
| 220 *220* QC | QC14- Inspect Spray Paint | 0.00 | <i>DAS 16 8-89</i> | | | | | | |
| Quality Control | Memo Then, Wrap in plastic bag to protect from scratches | 0.00 | | | | | | | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Item ID: D212-664-201

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Crosstube Aft

Stop

NS2

Start Date: 08/05/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 28/05/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|--|----------------------|--|-----------|--------------|---------------|---------------|------------------|------------------------------------|
| 230 *230* Crosstubes | Crosstubes | 0.00 | | | | | | | <i>AF</i> 12-7-15 |
| | Memo | 0.00 | | | | | | | |
| Crosstubes | 1-Abrade mating surfaces of support and crosstube with 400 grit sandpaper, clean the area with 4105S wash 'n' wipe | | | | | | | | |
| | 2-Install supports with Proseal 890 per DSI9563 and QSI 015 A/R Proseal 890 Batch: <u>121287</u> | | | | | | | | |
| | 3-Install clamps as per Dwg D212-664-241. Torque clamps to 80-100 in lb. | | | | | | | | |
| 240 *240* QC Quality Control | QC5- Inspect part completeness to step on W/O | 0.00 | <i>DAS</i> <i>15</i> <i>8-89</i> | <i>17</i> | <i>14116</i> | | | | |
| | Memo | 0.00 | | | | | | | |
| 250 *250* Packaging Packaging | Pick Kit | 0.00 | | | | | | | <i>12/8/16</i> <i>sf</i> <i>88</i> |
| | Memo | 0.00 | | | | | | | |

| W/O: | | WORK ORDER CHANGES | | | | | |
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NOTE: Date & initial all entries

Picklist Print

May-08-12 2:42:17 PM

Page 1

Work Order ID: 84263

84263
D212-664-201

Parent Item: D212-664-201

Parent Item Name: Crosstube Aft

Start Date: 08/05/2012

Required Date: 28/05/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:E04.02.16ReformatK/DS

IPP Rev:F 06-03-29 Remove Coments on Pick List JLM

IPP Rev:G 07-04-30 As per Rev C JLM

IPP Rev:H 08-05-22 up date Qty of rubber cushion DD verified by:EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|---------|
| D212-664- 201TRNRevC | | Manufactured | No | | | 110 | Each | 0.0000 | 1 | 1 | | Mo | 12-6-26 |

D212-664-201TRNRevC

Crosstube Turning Detail

D3595-063-530

Manufactured

No

85874

230

Each

183.0000

2 2

**

AP 12-7-15

D3595-063-530

RUBBER CUSHION

Location Loc Qty Loc Code

LG 144

79932
82656

64
80

3
1

MAT052 39

63407
67185
70067
72745
75783

6
6
18
2
7

D2940-1

Manufactured

No

230

Each

39.0000

2 2

**

AP 12-7-15

D2940-1

Support

Location Loc Qty Loc Code

LG052 39

79118
82657

19
20

2

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Picklist Print

May-08-12 2:42:17 PM

Page 2

Work Order ID: 84263

84263
D212-664-201

Parent Item: D212-664-201

Parent Item Name: Crosstube Aft

Start Date: 08/05/2012

Required Date: 28/05/2012

Start Qty: 1.00

Required Qty: 1.00

MS21920-28

Purchased

No

230

Each

83.0000

4

4

**

MS21920-28

Clamp(per MIL-DTL-8783C)

12-7-15

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
|-----------------|----------------|-----------------|

| | | |
|----|---|--|
| FG | 5 | |
|----|---|--|

| | | |
|--------|---|--|
| 105884 | 5 | |
|--------|---|--|

| | | |
|-------|----|--|
| LG050 | 58 | |
|-------|----|--|

| | | |
|--------|---|--|
| 116839 | 2 | |
|--------|---|--|

| | | |
|--------|---|--|
| 118713 | 4 | |
|--------|---|--|

| | | |
|--------|---|--|
| 120054 | 2 | |
|--------|---|--|

| | | |
|--------|----|---|
| 121067 | 50 | ④ |
|--------|----|---|

| | | |
|-------|----|--|
| LG051 | 20 | |
|-------|----|--|

| | | |
|--------|----|--|
| 121440 | 20 | |
|--------|----|--|

D3428-1

Manufactured

No

250

Each

33.0000

1

1

**

D3428-1

Placard

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
|-----------------|----------------|-----------------|

| | | |
|-------|----|--|
| ST042 | 33 | |
|-------|----|--|

| | | |
|-------|---|--|
| 78933 | 6 | |
|-------|---|--|

| | | |
|-------|----|---|
| 81881 | 17 | 1 |
|-------|----|---|

| | | |
|-------|----|--|
| 83582 | 10 | |
|-------|----|--|

MS21042L6

Purchased

No

250

Each

702.0000

6

6

**

MS21042L6

Nut

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
|-----------------|----------------|-----------------|

| | | |
|-------|-----|--|
| ST300 | 702 | |
|-------|-----|--|

| | | |
|--------|----|--|
| 117677 | 25 | |
|--------|----|--|

| | | |
|--------|---|--|
| 118384 | 3 | |
|--------|---|--|

| | | |
|--------|----|--|
| 118927 | 48 | |
|--------|----|--|

| | | |
|--------|-----|---|
| 119075 | 426 | 6 |
|--------|-----|---|

| | | |
|--------|-----|--|
| 120308 | 200 | |
|--------|-----|--|

| W/O: | | WORK ORDER CHANGES | | | | | | | |
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Work Order ID: 84263

Parent Item: D212-664-201

Parent Item Name: Crosstube Aft

84263
D212-664-201

Start Date: 08/05/2012

Required Date: 28/05/2012

Start Qty: 1.00

Required Qty: 1.00

AN960JD616 NAS1149D0663J Purchased

No

250

Each

0.0000

18

18

**

AN960.JD616

Washer

AN6-40A

AN6-40A

Bolt

Purchased

No

250

Each

114.0000

4

4

**

M121440
M121827

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
|-----------------|----------------|-----------------|

| | | |
|--------|-----|--|
| ST342 | 114 | |
| 120187 | 66 | |
| 120833 | 4 | |
| 121349 | 19 | |
| 121584 | 25 | |

Purchased

No

250

Each

55.0000

2

2

**

AN6-41A

AN6-41A

Bolt

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
|-----------------|----------------|-----------------|

| | | |
|--------|----|--|
| ST342 | 55 | |
| 119749 | 5 | |
| 120423 | 50 | |

12/1/64

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

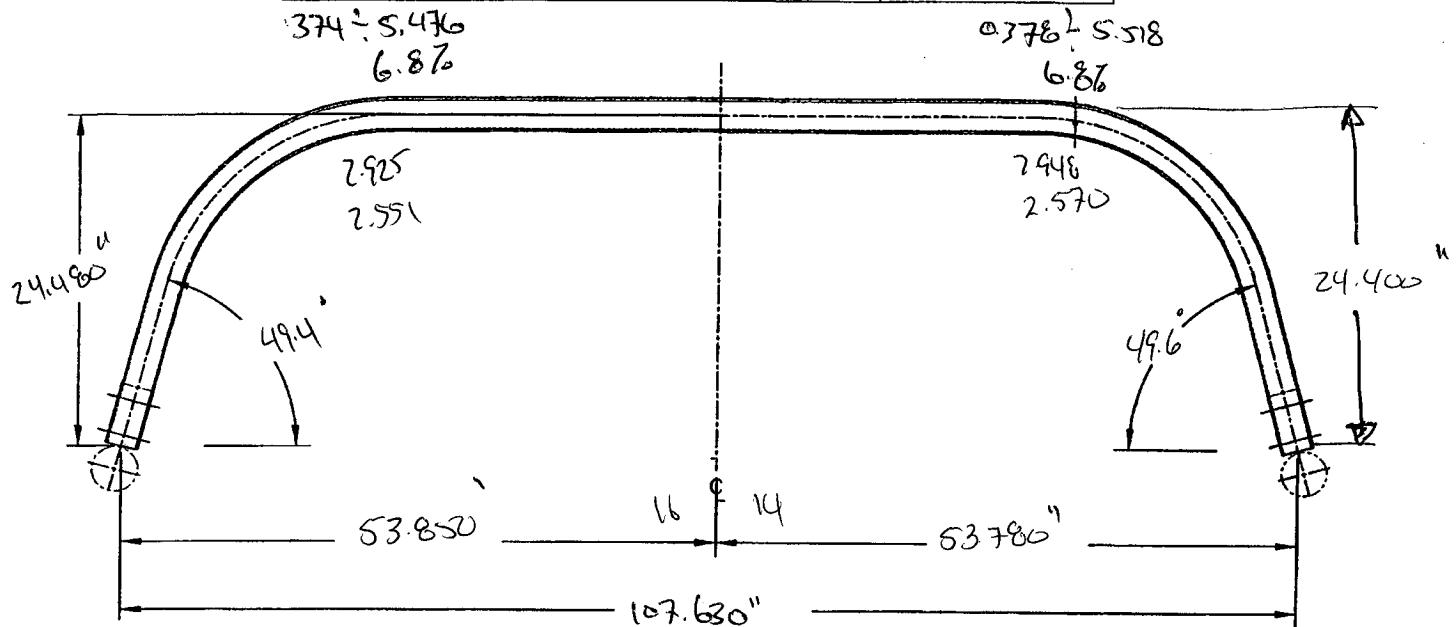
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NOTE: Date & initial all entries

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|---|--------------|--------------|
| DART AEROSPACE LTD | Work Order: | 87263 |
| Description: Crosstube High Aft (205/212) | Part Number: | D212-664-201 |
| Inspection Dwg: D212-664-241 | Rev: D | Page 1 of 1 |

| Required Dimension | Min | Max |
|--------------------|--------|--------|
| Height | 24.17 | 24.43 |
| 1/2 Span | 53.59 | 53.85 |
| Angle | 49 | 52 |
| Total Span | 107.18 | 107.70 |



| Comments | |
|---------------|----------------------|
| Side A = 6.87 | crushing @ 16 passes |
| Side B = 6.87 | crushing @ 14 passes |
| | |

| | |
|-----------------|-------------------------------------|
| QC15 Inspection | <input checked="" type="checkbox"/> |
| Date | 17/04/27 |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|-----------------------------------|------------|----------|
| A | 07.02.06 | New Issue | KJ/JM | |
| B | 07.05.08 | Dimensions updated per Dwg rev. C | KJ/JLM | |
| C | 10.04.01 | Dwg Rev updated | KJ | J |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

DART SERVICE INSTRUCTION

TO AMEND INSTRUCTIONS FOR CONTINUOUS AIRWORTHINESS ICA-D212-664 Rev. 6 OR LATER

REF. CANADIAN STC: SH01-9

REF. FAA STC: SR01298NY

REF. EASA STC: EASA.IM.R.S.01304

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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. D412-23M1
12/05/08

RETURN TO
ENGINEERING
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PURPOSE:

The supports on the following crosstubes are now installed using Proseal instead of Magnobond:

D212-664-101/-101B @ CHG 005
D412-664-105 @ CHG 002
D212-664-107/-107B @ CHG 002

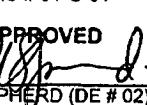
D212-664-201/-201B @ CHG 005
D212-664-207/-207B @ CHG 002

CHANGE:

For the crosstubes listed above, section 32.4 of ICA-D212-664 is amended as follows. Use Figure 1 of this service instruction and Figures 32-2 to 32-9 of ICA-D212-664 for further reference. For crosstubes of an earlier change number, it is recommended that if the supports are removed, the supports should be reinstalled using the procedure listed below.

32.4 SUPPORT INSTALLATION

- 32.4.1 Locate the area on the crosstube for installation of support (see Figure 1 of this service instruction). For D212-664-101/-107/-201/-207 and D412-664-105 crosstubes, the outward face of the support tabs should be 14.0" (355mm) from the crosstube center for 204/205/210/412/UH-1 aircraft. For installation on 214B/B-1 aircraft, the outward face of the support tabs should be 13.75" (349mm). Ensure paint finish of crosstube is intact; touch up as required per Chapter 5 (5.3.9) of ICA-D212-664.
- 32.4.2 If present, remove any paint/primer on bottom of supports. Abrade mating surfaces of support and crosstube with 400-grit sandpaper. Saturate a clean cloth with MEK or 4105S Wash'n'Wipe Degreaser or equivalent and wipe until there is no residue.
- 32.4.3 Ensure a layer of 3M Scotch-Weld 2216 B/A Epoxy Adhesive is on the bottom of the support. If required, either apply or touch-up support to have a 0.03" to 0.05" thick layer of adhesive over the entire mating surface. Allow supports to cure for 24 hours.
- 32.4.4 Abrade mating surfaces of support (after cure) and crosstube with 180-grit sandpaper. Saturate a clean cloth with MEK or 4105S Wash'n'Wipe Degreaser or equivalent and wipe until there is no residue.
- 32.4.5 Apply a 0.04" to 0.07" thick layer of Proseal 890 Class B or AMS-S-8802 Class B sealant underneath applicable support and install support as shown in Figure 1 of this service instruction.
- 32.4.6 Install the clamps opposite to crosstube support as shown in section A-A of Figure 1. Install rubber cushions underneath each clamp around the bottom circumference of the crosstube up to the crosstube centerline. Torque clamps 80-100 in-lb (9.0-11.3 Nm). It is acceptable to use smaller or larger sized MS21920-XX clamps than those listed in ICA-D212-664, ensure that after torquing the clamps per this instruction, the nuts are in safety but not bottomed out.
- 32.4.7 Prior to installing crosstube on aircraft, allow supports to cure for 72 hours and recheck torque on clamps.

| | |
|-------------------------|---|
| CANADA | |
| DEPARTMENT OF TRANSPORT | |
| AIRCRAFT CERTIFICATION | |
| BRANCH | |
| DAO # 01-O-01 | |
| APPROVED | |
| BY: |  |
| D. SHEPHERD (DE # 02) | |
| DATE: | 11.07.20 |
| CERT. NO.: | SH01-9 |
| ISSUE NO.: | 3 |

| B | ADD 3M 2216 ADHESIVE TO SUPPORT | | CP | 11.07.15 |
|--|---|--|---|--------------|
| A | NEW ISSUE | | CP | 11.06.14 |
| REV. | DESCRIPTION | | BY | DATE |
| DESIGN | P | | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| DRAWN | P | | | |
| CHECKED | ASS | | | |
| MFG. APPR. | N/A | | | |
| APPROVED | JWD | | | |
| DE APPR. |  | | | |
| DATE | 11.07.15 | | DRAWING NO. | REV. B |
| | | | DSI 9563 | SHEET 1 OF 2 |
| | | | TITLE | |
| | | | SCALE | |
| | | | NTS | |
| | | | SUPPORT INSTALLATION CHANGE | |
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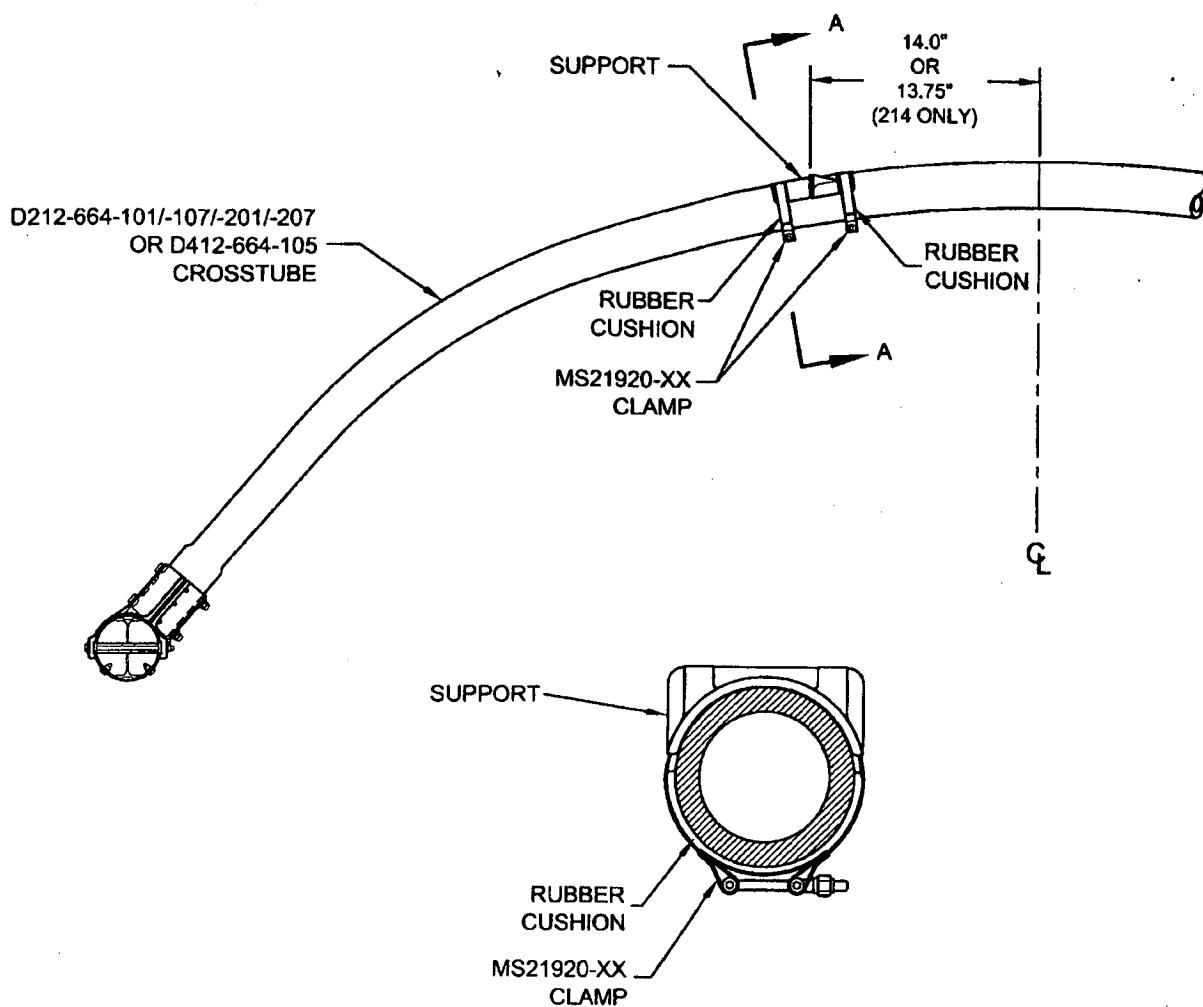
| W/O: | | WORK ORDER CHANGES | | | | | |
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| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries



SECTION A-A

FIGURE 1: SUPPORT INSTALLATION

| | |
|-------------------------|--------------------|
| CANADA | |
| DEPARTMENT OF TRANSPORT | |
| AIRCRAFT CERTIFICATION | |
| BRANCH | |
| DAO # 01-0-01 | |
| APPROVED | |
| BY: | <i>[Signature]</i> |
| D. SHEPHERD (DE # 02) | |
| DATE: | 11.07.20 |
| CERT. NO.: | SH01-9 |
| ISSUE NO.: | 3 |

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| DESIGN | <i>IP</i> | DART AEROSPACE LTD | |
| DRAWN | <i>IP</i> | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | <i>ASS</i> | DRAWING NO. | REV. B |
| MFG. APPR. | <i>N/A</i> | DSI 9563 | SHEET 2 OF 2 |
| APPROVED | <i>JAD</i> | TITLE | SCALE |
| DE APPR. | <i>TH</i> | SUPPORT INSTALLATION CHANGE NTS | |
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| W/O: | | WORK ORDER CHANGES | | | | | | | |
|------|------|--------------------|--|--|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | | | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

D

| Item | Qty | Qty | Part Number | Description |
|------|------|-------|----------------|---|
| | -241 | -241B | | |
| 1 | X | | D212-664-241 | CROSSTUBE ASSEMBLY (205/212 HIGH AFT) |
| 2 | | X | D212-664-241B | CROSSTUBE ASSEMBLY (214 HIGH AFT) |
| 3 | 1 | 1 | D6006-129 | CROSSTUBE |
| 4 | 2 | 2 | D2940-1 | SUPPORT |
| 5 | 4 | 4 | D3595-063-530 | RUBBER CUSHION |
| 6 | 4 | 4 | MS21920-28 | CLAMP (OR MS21920-30) |
| 7 | A/R | A/R | MAGNOBOND 6398 | ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE) |

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6006-129
FINISHED LENGTH = 124.362±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D212-664-XXX" AND BATCH NUMBER ON INSIDE OF CUFF
USING VIBRATING STYLUS.
- 7) WEIGHT: D212-664-241 = 44.2 lbs (PER IIN-D212-664)
D212-664-241B = 44.2 lbs (PER IIN-D212-664)
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 5 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING
IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2940-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE
OF D2940-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS
AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-28 CLAMPS (OR -30) WITH D3595-063-530 RUBBER CUSHIONS TO SECURE THE D2940-1
SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE
SUPPORT.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE
SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR
DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND
MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT
HAS NOT BOTTOMED-OUT AFTER TORQUING.

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WORK ORDER

NO. 04263 MLJ

600 #11-614

11.08.28

12/05/08

UNDER REVIEW

04263

DEO ATTACHED

RELEASED

2009-10-29

| | | | |
|------|---|----|----------|
| D | REFORMAT/REVISE GENERAL NOTES/PART LIST; REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS; ADD -241B (ZN D4-2, B4-2); REMOVED REF & ADD TOLERANCES (ZN D8-3 & C4-3, C6-3 & A8-3); RELOCATED FLAG #0 PER PAR 08-046 (ZN A5-3); MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4 | RF | 09.09.30 |
| C | REMOVE -1009 ABRASION STRIP; ADD MAGNOBOND 6398, CUSHION, REVERSE CLAMPS | PH | 07.03.08 |
| B | ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES | PH | 05.02.04 |
| A | NEW ISSUE | PH | 00.12.12 |
| REV. | DESCRIPTION | BY | DATE |

| | | | |
|------------|----------|--|--------------|
| DESIGN | PH | DART AEROSPACE LTD | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | PP | DRAWING NO. | REV. D |
| MFG. APPR. | DS | D212-664-241 | SHEET 1 OF 4 |
| APPROVED | MP | TITLE | SCALE |
| DE APPR. | MF | CROSSTUBE ASS'Y (205/212 HI AFT) | NTS |
| DATE | 09.09.30 | COPRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE LTD. IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. | |

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| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

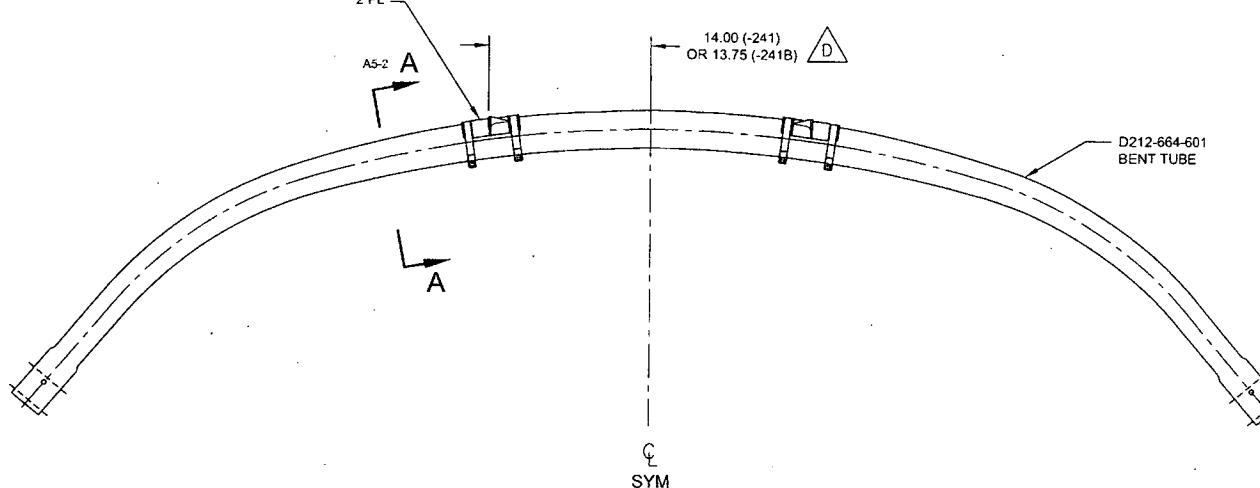
8 7 6 5 4 3 2 1

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12 13 15
D2940-1 SUPPORT
MS21920-28 CLAMP, 2X
D3595-063-530 RUBBER CUSHION, 2X
2 PL

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D212-664-241/-241B
ASSEMBLY DETAIL

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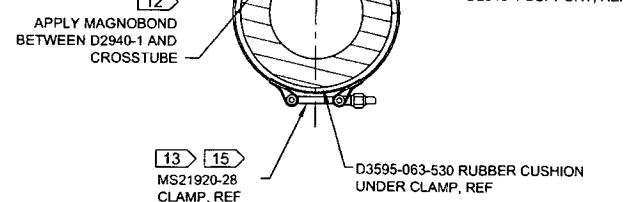
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SECTION A-A D6-2
SCALE 4X

| DESIGN | PH | DART AEROSPACE LTD |
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| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA |
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| MFG. APPR. | MM | REV. D |
| APPROVED | MM | SHEET 2 OF 4 |
| DE APPR. | MM | TITLE |
| DATE | 09.09.30 | SCALE |
| | | CROSSTUBE ASSY (205/212 HI AFT) NTS |

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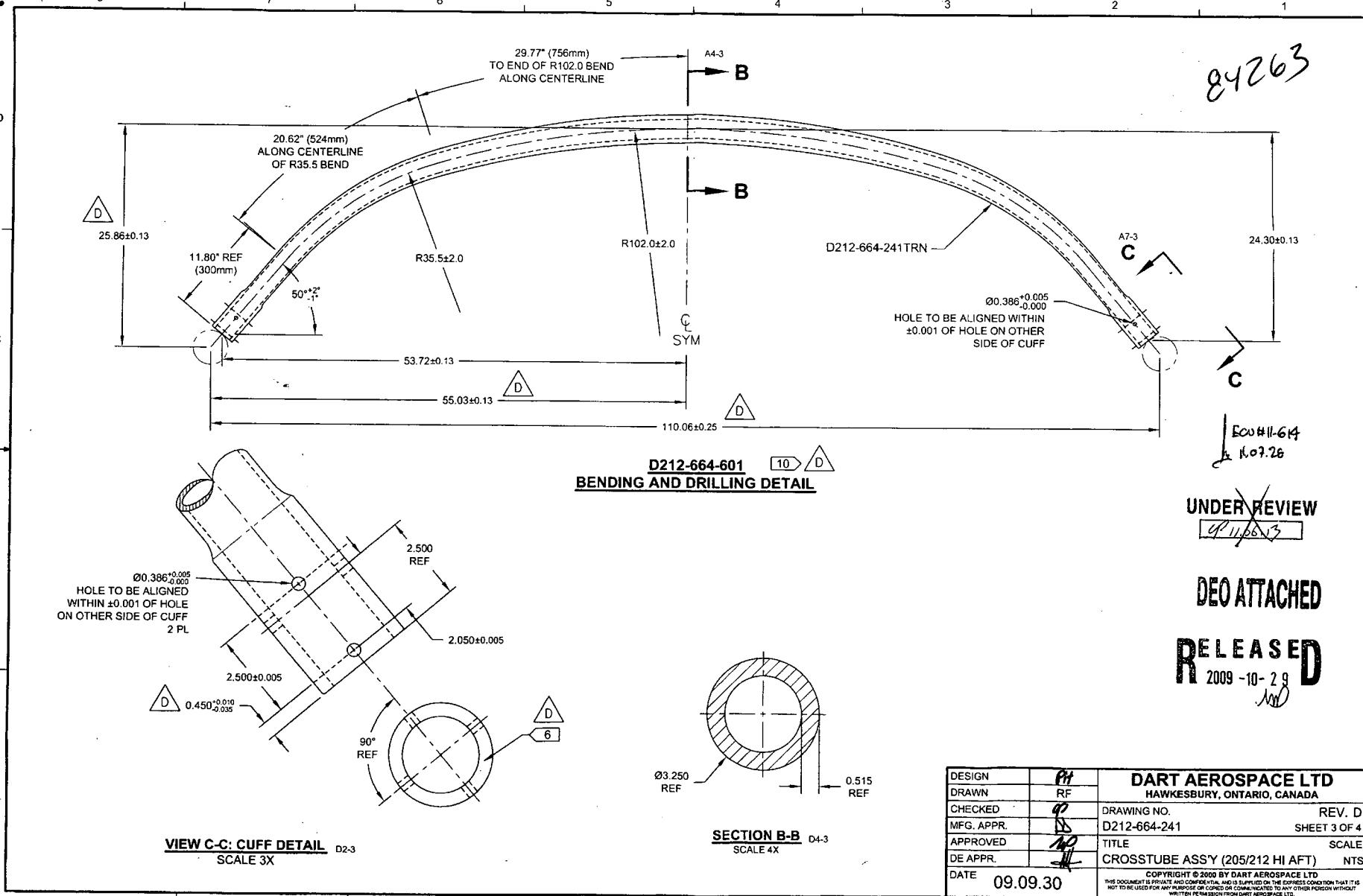
| W/O: | | WORK ORDER CHANGES | | | | | |
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| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries



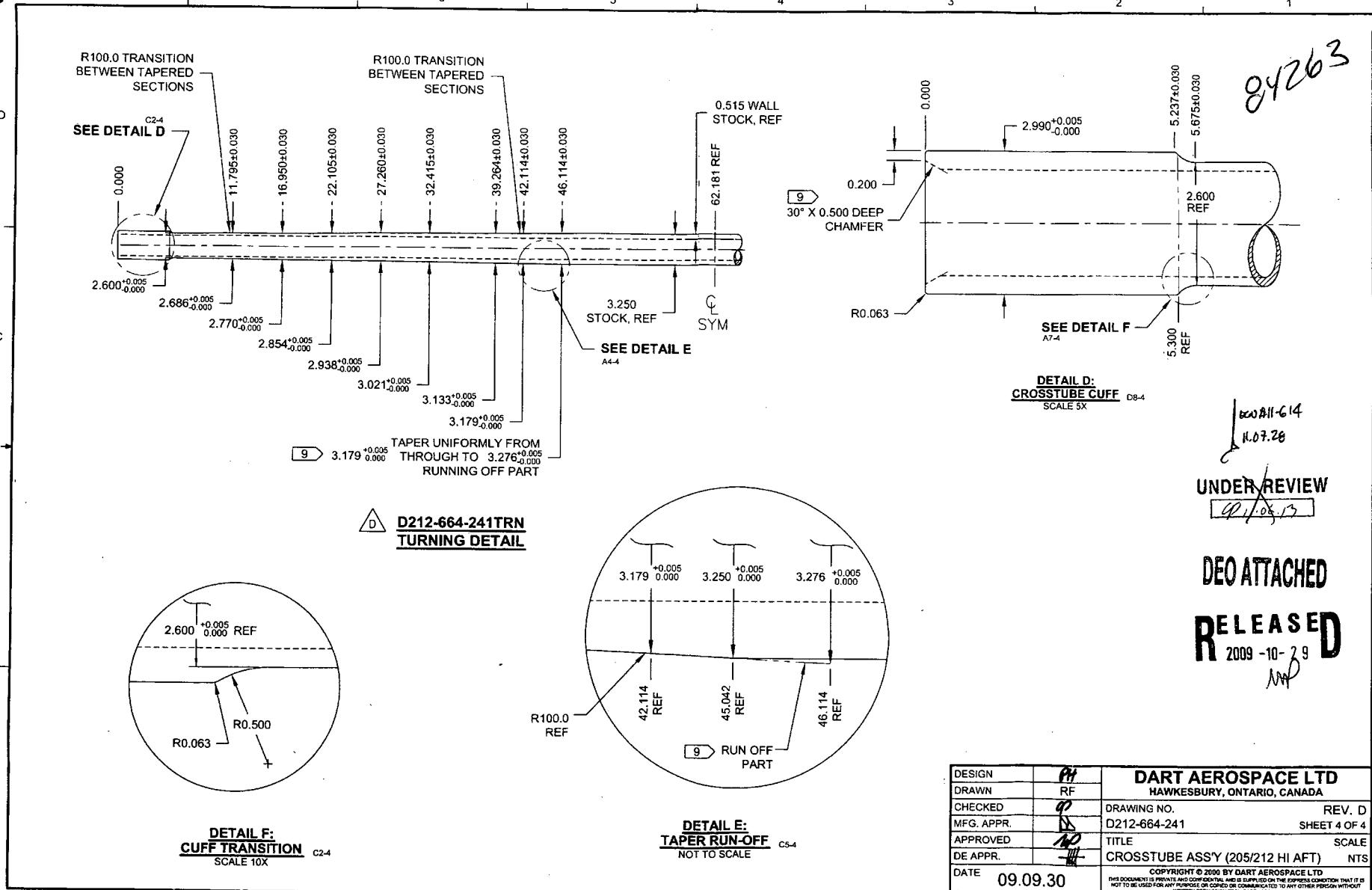
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| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries



| DESIGN | R4 | DART AEROSPACE LTD | |
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| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | 99 | DRAWING NO. | REV. D |
| MFG. APPR. | 99 | D212-664-241 | SCALE 4 OF 4 |
| APPROVED | 100 | TITLE | NTS |
| DE APPR. | 100 | CROSSTUBE ASSY (205/212 HI AFT) | |
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9/1/05/13

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2009-10-29

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| W/O: | | WORK ORDER CHANGES | | | | | |
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| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

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| DRAWING NO. D212-664-241 | TITLE CROSSTUBE ASSY (205/212 HI AFT) | REV. D | DART AEROSPACE LTD ENGINEERING ORDER | D.E.O. NO. D212-664-241-D-1 | SHEET NO. SHEET 1 OF 2 | SCALE NTS |
| DRAWN | CHECKED | 10 | MFG. APPR. | 12 | APPROVED | MP |
| DATE 11.04.07 | DATE 11.04.11 | DATE 11.04.12 | DATE 11/04/12 | DATE 11.04.12 | DATE 11.04.12 | DE APPR. |

PURPOSE:
ADD AN INSPECTION WINDOW TO UNDERSIDE OF CROSSTUBE.

CHANGE:

NOTES 2 OF SHEET 1 IS AMENDED AS FOLLOWS:

IS:

- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
MASK UNDERSIDE OF CROSSTUBE AS SHOWN (HATCHED AREA) AND
PAINT OUTSIDE PER DART QSI 005 4.2
REMOVE MASKING AND APPLY CLEAR COAT

WAS:

- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2

RELEASED
2011-04-18

UNDER REVIEW

CP 11.06.13
ECU011-G14
21.07.20

84263

| W/O: | | WORK ORDER CHANGES | | | | | |
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| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

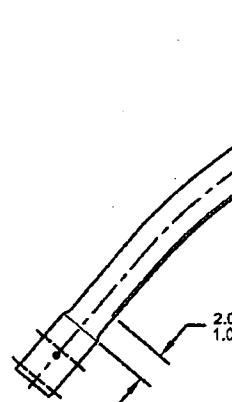
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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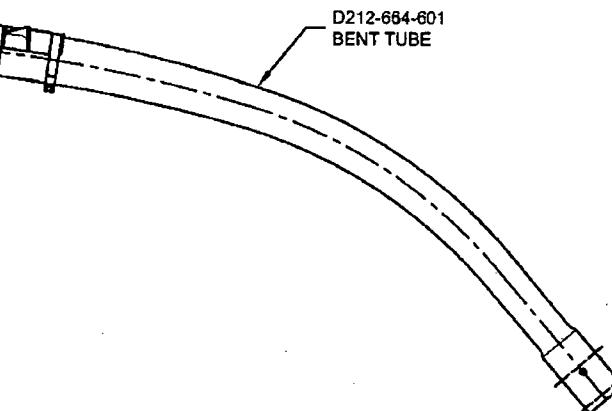
NOTE: Date & initial all entries

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| DRAWING NO. D212-664-241 | TITLE CROSSTUBE ASSY (205/212 HI AFT) | REV. D | DART AEROSPACE LTD ENGINEERING ORDER | D.E.O. NO. D212-664-241-D-1 | SHEET NO. SHEET 2 OF 2 | SCALE NTS |
| DRAWN DATE 11.04.07 | CHECKED DATE 11.04.11 | MFG. APPR. <i>RP</i> DATE 11.04.11 | APPROVED <i>MD</i> DATE 11.04.12 | DE APPR. <i>RP</i> DATE 11.04.12 | | |
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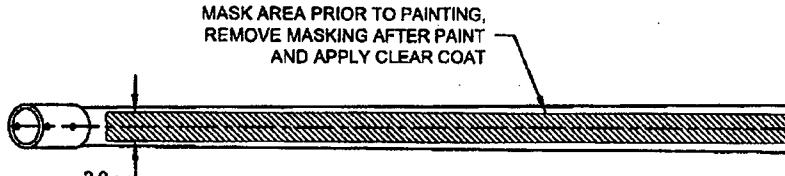
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WAS:



D212-664-241/241B
ASSEMBLY DETAIL



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RELEASED
2011-04-18
RP

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*RP 11.04.13
11.07.28*

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

| | | | | | | |
|-----------------------------|---|----------------------|---|--------------------------------|---------------------------|--------------|
| DRAWING NO. D212-664-241 | TITLE CROSSTUBE ASS'Y (205/212 HI AFT) | REV. D | DART AEROSPACE LTD ENGINEERING ORDER | D.E.O. NO. D212-664-241-D-2 | SHEET NO. SHEET 1 OF 1 | SCALE NTS |
| DRAWN <i>90</i> | CHECKED <i>ASS</i> | MFG. APPR. <i>BS</i> | APPROVED <i>MAP</i> | DE APPR. <i>MAP</i> | | |
| DATE 11.07.15 | DATE 11.07.20 | DATE 11.07.21 | DATE 11.07.21 | DATE 11.07.21 | DATE 11.07.21 | |

PURPOSE:
REPLACE MAGNOBOND WITH PROSEAL.

04263

CHANGE:

IS:

| Item | Qty -241 | Qty -241B | Part Number | Description |
|------|-------------|--------------|-----------------|-------------------------------|
| 7 | A/R | A/R | PROSEAL 890 B-2 | SEALANT, AMS-S-8802 CLASS B-2 |

WAS:

| | | | | |
|---|-----|-----|----------------|---|
| 7 | A/R | A/R | MAGNOBOND 6398 | ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE) |
|---|-----|-----|----------------|---|

NOTE 12 & 15, SHEET 1 IS AMENDED AS FOLLOWS:

IS:

- 12) TO INSTALL D2940-1 SUPPORT: ABRADE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.04" TO 0.07" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.

WAS:

- 12) INSTALL D2940-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2940-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

*RELEASED
2011-07-18
MAP*

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng. | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries



LIQUID PENETRANT TEST REPORT

P- 12192

CLIENT DATE July 14 6/2012 PAGE 1 OF 1
 ATTENTION LINDA ANDY TIME AM PM
 ADDRESS 1270 ABERDEEN ST
BAKERSFERRY, ON.
 PROJECT F.P.I. on cross tubes
 ITEM(S) EXAMINED 7 PCS

JOB DESCRIPTION PROCEDURE NO. LT 002 REV./DATE 2008 TECHNIQUE NO. LT 1412 REV./DATE 2008
 PART NO. SEE RESULTS MATERIAL Aluminum - THICKNESS Various
 SCOPE A WET FLUORESCENT LIQUID PENETRANT EXAMINATION WAS
COMPLETED ON THE EXTERNAL SURFACE 100%

TEST DETAILS

| | | | | | |
|-------------------|---|----------------------------------|--|--|---|
| METHOD | <input checked="" type="checkbox"/> FLUORESCENT | <input type="checkbox"/> VISIBLE | <input checked="" type="checkbox"/> WATER WASH | <input type="checkbox"/> SOLVENT REMOVABLE | <input type="checkbox"/> POST EMULSIFIED |
| FAMILY BRAND | <u>MAGNAFLU</u> | | | | |
| PENETRANT | <u>ZL607</u> | MINIMUM DWELL TIME | <u>95 10</u> MIN. | BLACK LIGHT S/N | <u>16959</u> <input type="checkbox"/> OUTPUT > 1000 μ W/cm ² <input type="checkbox"/> AMBIENT < 2 fc |
| PENETRANT REMOVER | <u>H2O</u> | MINIMUM DRY TIME | >10 MIN. | LIGHTING EQUIP. | <input type="checkbox"/> FLASHLIGHT <input type="checkbox"/> TROUBLELIGHT <input type="checkbox"/> OUTPUT > 100 fc @ SURFACE |
| DEVELOPER | <u>SKD52</u> | MINIMUM DWELL TIME | 10 MIN. | OTHER | <u>LAB 120</u> <input type="checkbox"/> LIGHT METER S/N <u>098866</u> <input type="checkbox"/> CAL DUE DATE <u>July 14 08</u> |
| DEVELOPER TYPE | <input type="checkbox"/> NON AQUEOUS | <input type="checkbox"/> AQUEOUS | <input type="checkbox"/> DRY | | <input type="checkbox"/> 2012. |

TEST SURFACE

| | | | | | |
|---------------------|---------------------------------------|---|---|---------------------------------------|--|
| SURFACE CONDITION | <input type="checkbox"/> AS GROUND | <input type="checkbox"/> AS WELDED | <input checked="" type="checkbox"/> MACHINED | <input type="checkbox"/> SHOT BLASTED | <input checked="" type="checkbox"/> CLEAN BARE METAL |
| SURFACE TEMPERATURE | <input type="checkbox"/> < -4°C/ 20°F | <input type="checkbox"/> - 4°C/ 20°F TO 10°C/50°F | <input checked="" type="checkbox"/> 10°C/50°F TO 52°C/125°F | <input type="checkbox"/> > 52°C/125°F | |

RESULTS- METRIC IMPERIAL

| | | | |
|-------------|-------------------|---|-------------------------------------|
| <u>W.O.</u> | <u>Cross tube</u> | | |
| <u>1</u> | <u>84263</u> | " | <input checked="" type="checkbox"/> |
| <u>1</u> | <u>84262</u> | " | <input checked="" type="checkbox"/> |
| <u>1</u> | <u>83088</u> | " | <input checked="" type="checkbox"/> |
| <u>1</u> | <u>86010</u> | " | <input checked="" type="checkbox"/> |
| <u>1</u> | <u>86011</u> | " | <input checked="" type="checkbox"/> |
| <u>1</u> | <u>85056</u> | " | <input checked="" type="checkbox"/> |
| <u>1</u> | <u>85057</u> | " | <input checked="" type="checkbox"/> |

7/12/07/09

Scope of Services

The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care

In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

| | | | |
|----------------------------|------------------------------|-----------------------------|-----------------------------------|
| CLIENT REPRESENTATIVE | <u>Andy Sheldon</u> PRINT | <u>Sheldon</u> SIGNATURE | DTR # <u>E-63666</u> |
| TECHNICIAN (SIGNATURE): | <u>F.M.K. Lutington</u> | | REPORT REVIEWED BY: |
| NAME (PRINT): | <u>F.M.K. Lutington</u> | | NAME <u> </u> INITIALS <u> </u> |
| 1 ST TECHNICIAN | <u> </u> | 2 ND TECHNICIAN | |
| CGSB LEVEL | <u> </u> | CGSB LEVEL | <u> </u> |
| CGSB REG. NO. | <u>66066</u> | CGSB REG. NO. | <u> </u> |

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CANARY - OFFICE COPY

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GOLD - OFFICE COPY